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10/571,063

03/08/2006

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EXAMINER

STEINBERG, JEFFREY S

ART UNIT

PAPER NUMBER

2629

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/571,063 | Applicant(s) AOKI ET AL. | |
| | Examiner JEFFREY STEINBERG | Art Unit 2629 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-5 and 7-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-5 and 7-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/20/06, 03/08/06</u> . | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

1. This Application has been examined. The preliminary amendment received 03/08/2006 has been entered. The original claims 3-5 and 7-10 remain pending. The examination results are as follows.

Claim Rejections - 35 USC § 112

2. Claims 5 and 8 are ejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "narrow" in claims 5 and 8 is a relative term which renders the claim indefinite. The term "narrow" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

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claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3-5 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara et al.(7,113,158) in view of a US Patent to Hirimai (7446733), and further in view of a US Patent Application Publication by Maeda (2007/0152934).

Regarding Claim 3, Fujiwara discloses a display panel (Col. 4, l. 64) comprising: display image generating means (1) for generating a display image according to inputted display data; the display image generating means being an active matrix type display panel (Col. 10., ll. 10-11). However, Fujiwara fails to disclose a display image separating means for separating the display image, at one time or in a time division manner, according to a plurality of viewpoints, aperture sections in each pixel pattern of the display panel having a width set so as not to fall within a range specified by the following inequality: $2\text{ }\mu\text{m}$ (minimum width of the aperture sections in the pixel) $< 7\text{ }\mu\text{m}$.

Hirimai teaches a "time division basis" (Fig. 49; Col. 40, ll. 62-64) as well as the principle of "image width modulation." (Fig. 44, Col. 10, ll. 22-23).

Maeda teaches an improvement of the aperture ratio through the use of a low temperature polycrystalline Si-transistor (Pg. 12, ¶[0307]).

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Fujiwara, Hirimai and Maeda are analogous because they are all concerned with the same endeavor, Display Apparatus.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Display Device disclosed by Fujiwara with the teachings of Hirimai and Maeda since such a modification would have added quality to the performance of the display device.

Regarding Claim 4, Fujiwara, as modified by Hiramai and Maeda above, discloses the display panel according to claim 3, wherein the width of the aperture sections in the pixel pattern of the active matrix type display panel is set so as not to fall within a range specified by the following inequalities: $2\text{ }\mu\text{m} < (\text{minimum width of the aperture sections in the pixel}) < 8\text{ }\mu\text{m}$, and $10\text{ }\mu\text{m} < (\text{minimum width of the aperture sections in the pixel}) < 16\text{ }\mu\text{m}$.

Maeda further teaches an improvement of the aperture ratio through the use of a low temperature polycrystalline Si-transistor (Maeda, Pg. 12, ¶[0307]), where “the pixel aperture ratio becomes considerably low.”(Emphasis supplied)(Id.).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Display Device disclosed by Fujiwara with the teachings of Hirimai and Maeda, since such a modification would have added quality to the display device.

Regarding Claim 5, Fujiwara, discloses a display panel comprising: display image generating means (1) for generating a display image according to inputted display data; the display image generating means being an active matrix type display panel (Col. 10., ll. 10-11).

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However, Fujiwara fails to disclose a display image separating means for separating the display image, at one time or in a time division manner, according to a plurality of viewpoints, and a light shielding film being provided to avoid that the light enters aperture sections, in each of the display panel having a narrow gap.

Hirimai teaches a time division manner according to a plurality of viewpoints, the display image generating means being an active matrix type display panel (Fig. 50; Col. 6, l. 1; and Col. 10, ll. 22-23).

Maeda teaches a light shielding film (Pp. 7-8, ¶[0252]) being provided to avoid that the light enters aperture sections, in each pixel pattern of the display panel, having an improved aperture ratio (Maeda, Pg. 12, ¶[0307]), where “the pixel aperture ratio becomes considerably low.” (Emphasis supplied) (Id.).

Fujiwara and Maeda are analogous because they are all concerned with the same endeavor, Display Apparatus.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Display Device disclosed by Fujiwara with the teachings of Hirimai and Maeda, since such a modification would have added quality to the display device.

Regarding Claim 7, Fujiwara, as modified by Maeda above discloses the display panel according to claim 5, wherein the width of the aperture sections shielded by the light-shielding film is set to satisfy the following inequality: $2\text{ }\mu\text{m}$ (minimum width of the aperture sections in the pixel) $< 7\text{ }\mu\text{m}$. US Patent Application Publication by Maeda, teaches an improvement of the aperture ratio through the use of a low temperature polycrystalline Si-transistor. (Maeda, Pg. 12,

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¶[0307])). Fujiwara, Hirimai and Maeda are analogous because they are all concerned with the same endeavor, Display Apparatus. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Display Device disclosed by Fujiwara with the teachings of Hirimai and Maeda since such a modification would have added quality to the performance of the display device.

Regarding Claim 8, Fujiwara, as modified by Hirimai and Maeda above discloses the claimed invention, which comprises the active matrix type display panel includes: an auxiliary capacitor in the pixel; and auxiliary capacity wiring constituting the auxiliary capacitor (Maeda, Fig. 2 and Pg. 14, ¶[0328]) the auxiliary capacity wiring having a narrow line width at an intersection with a source line and having a broad line width in a pixel pattern. Fujiwara, Hirimai and Maeda are analogous because they are all concerned with the same endeavor, Display Apparatus. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Display Device disclosed by Fujiwara with the teachings of Hirimai and Maeda since such a modification would have added quality to the performance of the display device.

Regarding Claim 9, Fujiwara, as modified by Hirimai and Maeda above discloses the claimed invention, which comprises the active matrix type display panel is a TFT (thin film transistor) driven type display panel (Maeda, Pg. 11, ¶[0293]).

Regarding Claim 10, Fujiwara, as modified by Hirimai and Maeda above discloses the claimed invention, which comprises the display panel (Fujiwara, Col. 4, l. 64).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Takeda et al. (US 7304703) and Ishikawa et al. (US 7,123,417).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY STEINBERG whose telephone number is (571)270-7617. The examiner can normally be reached on Monday-Friday 7:30am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Eisen can be reached on 571-272-7687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JEFFREY STEINBERG/
Examiner, Art Unit 2629

/Henry N Tran/
Primary Examiner, Art Unit 2629